

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CASS POND	Lake Area (ha): 19.59
Town: RICHMOND	Maximum depth (m): 7.9
County: Cheshire	Mean depth (m): 2.4
River Basin: Connecticut	Volume (m <sup>3</sup> ): 516500
Latitude: 42°44'43" N	Relative depth: 1.5
Longitude: 72°15'45" W	Shore configuration: 1.75
Elevation (ft): 1052	Areal water load (m/yr): 2.32
Shore length (m): 2900	Flushing rate (yr <sup>-1</sup> ): 1.00
Watershed area (ha): 98.1	P retention coeff.: 0.79
% watershed ponded: 0.0	Lake type: natural

<u>BIOLOGICAL:</u>		13 February 2003	30 July 2002
DOM. PHYTOPLANKTON (% TOTAL)	#1	PERIDINIUM 80%	RHIZOSOLENIA 60%
	#2	DINOBRYON 15%	CHRYOSOPHAERELLA 9%
	#3		COELOSOPHAERIUM 6%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			8.23
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 22%	KERATELLA 32%
	#2	CILIATE SPP. 20%	ROTIFER SPP. 11%
	#3	ASPLANCHNA 18%	SYNCHAETA 9%
ROTIFERS/LITER		137	307
MICROCRUSTACEA/LITER		36	65
ZOOPLANKTON ABUNDANCE (#/L)		222	401
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.9
BOTTOM DISSOLVED OXYGEN (mg/L)		10.1	0.3
BACTERIA (E. coli, #/100 ml)	#1		4
	#2		< 1
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : 6700

**CHEMICAL:**

Lake: CASS POND

Town: RICHMOND

	13 February 2003		30 July 2002		
DEPTH (m)	1.5	3.0	2.0		4.0
pH (units)	5.7	5.7	6.2		6.1
A.N.C. (Alkalinity)	1.9	1.8	1.7		1.8
NITRATE NITROGEN	0.05	0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.40	0.40		0.30
TOTAL PHOSPHORUS	0.005	0.006	0.007		0.009
CONDUCTIVITY ( $\mu$ mhos/cm)	36.1	35.9	40.6		
APPARENT COLOR (cpu)	8	8	20		20
MAGNESIUM			0.39		
CALCIUM			1.5		
SODIUM			3.2		
POTASSIUM			< 0.40		
CHLORIDE	5	5	4		4
SULFATE	4	4	3		3
TN : TP	70	75	57		33
CALCITE SATURATION INDEX			4.7		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 2002**

D.O. S.D. PLANT CHL TOTAL CLASS

**	3	3	2	8	Meso.
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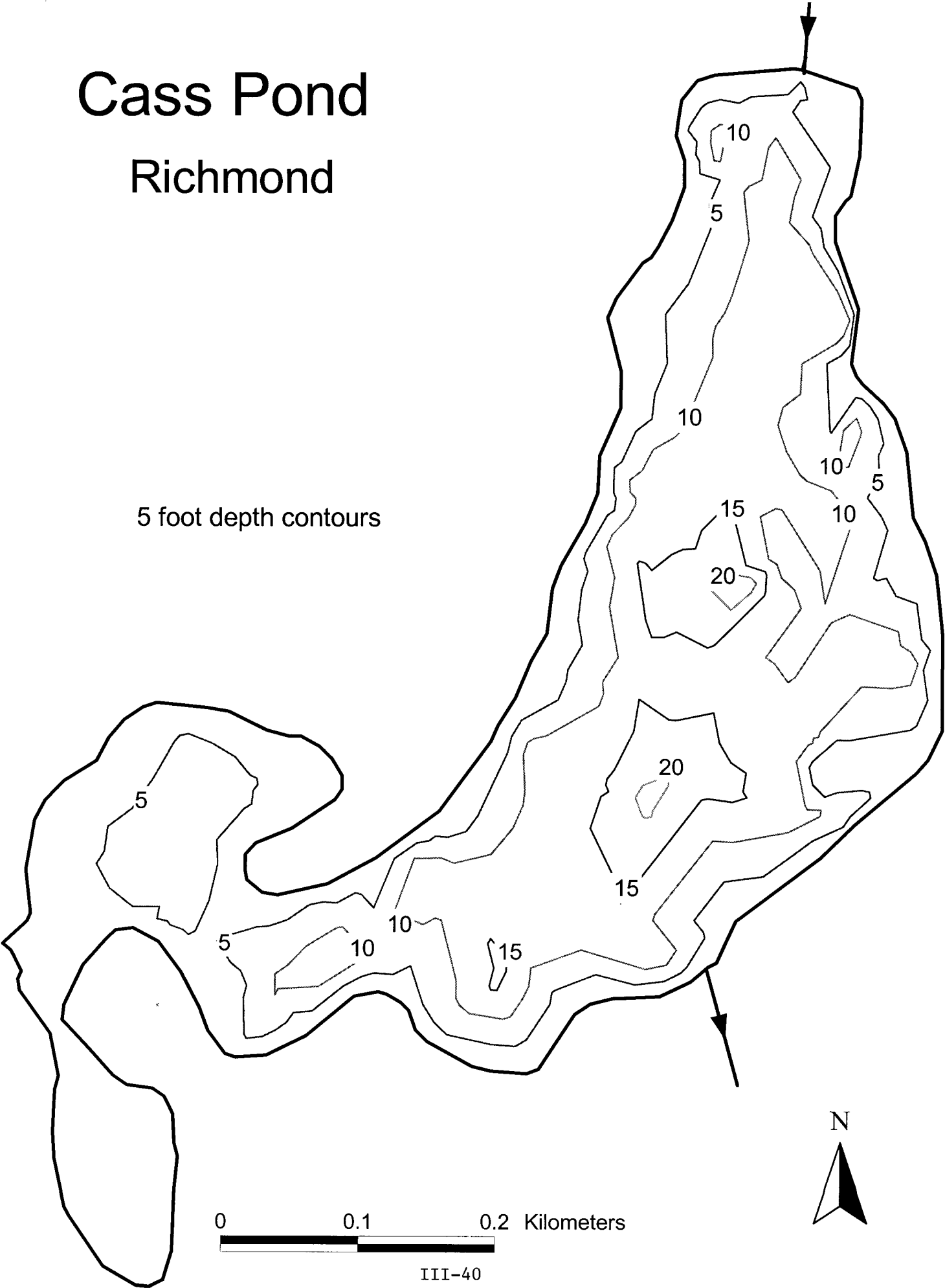
**COMMENTS:**

1. aka Wheeler Pond and Case's Pond.
2. 10 mph speed limit for boats on the pond.
3. No public access; unimproved launch area for small boats located at the town beach but signed for town residents only.
4. Previously surveyed in 1982 and was rated oligotrophic in 1982. Change in trophic class was mainly due to increased algal growth (chlorophyll from 1.4 to 8) and decreased water clarity (transparency from 7 to 3 meters). More frequently collected data is needed to determine if this is a real trend or a yearly variation.
5. Not heavily developed: one juvenile camp, one campground and about a dozen cottages.

# Cass Pond

## Richmond

5 foot depth contours



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TOWN: RICHMOND  
WEATHER: Hot & breezy

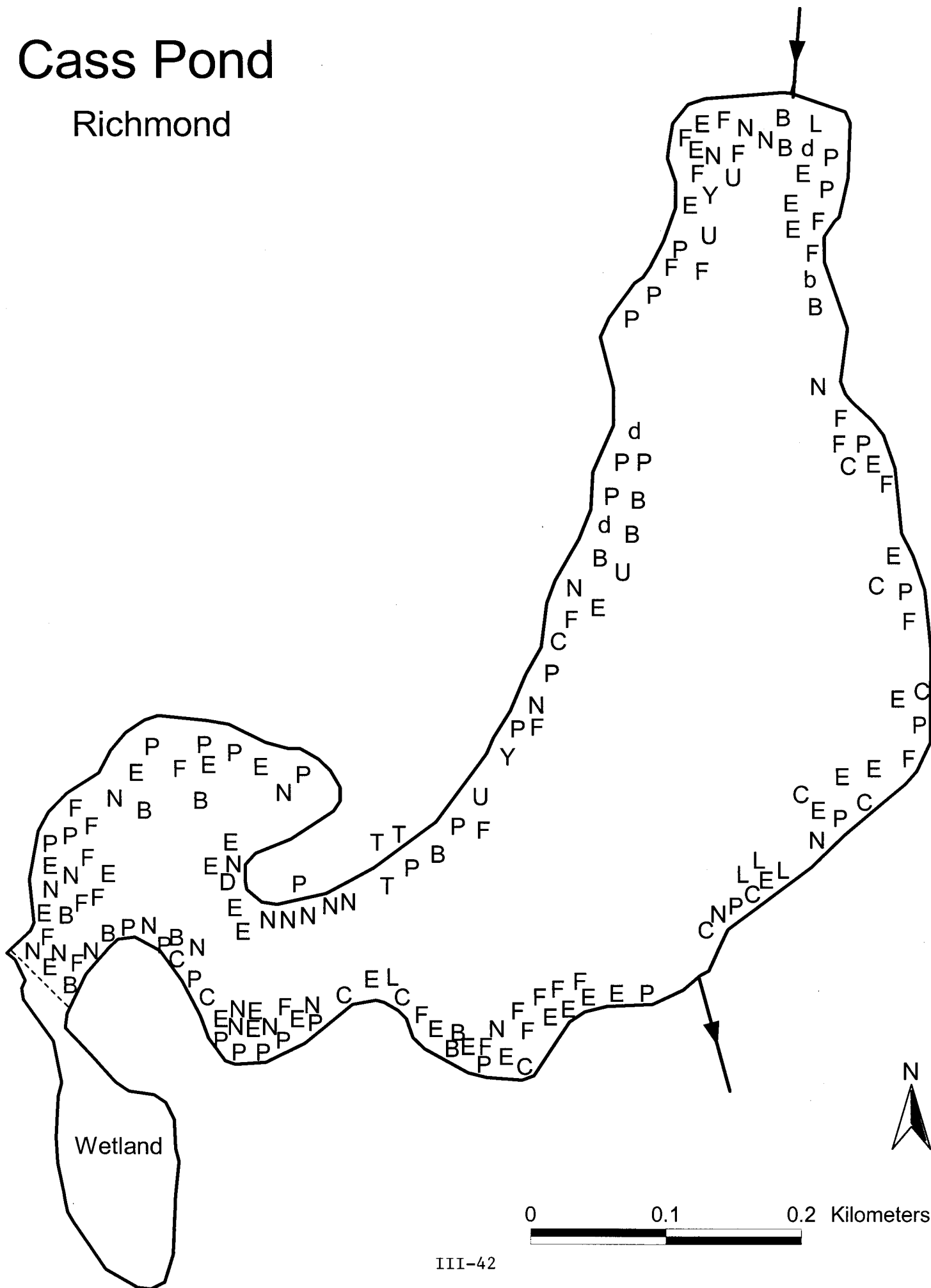
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**COMMENTS :**

\*Dissolved oxygen values are in mg/L

# Cass Pond

Richmond



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